



**COMM 550: Quantitative Research
Methods in Communication
4 Units**

Spring 2020 – Thursday 9:30AM-12:20PM

Section: 20828D

Location: ASC228

Instructor: Professor Lynn Carol Miller

Office: ASC101B

Office Hours: Thursday 2:30-3:30 PM or by appointment

Contact Info: lmiller@usc.edu, 310-874-3402

Teaching Assistant: Liyuan (Leah) Wang

Office: ASC G4

Office Hours: 12:30pm to 1:30pm

Contact Info: liyuanwa@usc.edu, 765-491-1022

I. Course Description

COMM 550, Quantitative Research Methods in Communication, is designed to introduce you to the process of conducting quantitative research in communication. This process begins with the development of an initial focal point or idea (based on everyday observation, prior research, and theory), proceeds through a variety of decisions made regarding problem selection, problem development, data collection, data analysis, inferences about what the findings mean, and decisions about how to “write them up” (using the *Publication Manual of the American Psychological Association* (7th edition). The focus therefore is on: (1) providing a “road map” for thinking about and doing research, using “case” based learning (2) assessing (e.g., via labs and drafts, tests and exams) your emerging more granular quantitative knowledge and skills and providing feedback and opportunities to improve that knowledge/skill base, and (3) most importantly, giving you a step-by-step “hands on” scaffolded experience of generating research questions and hypotheses, designing studies, acquiring IRB approval for studies, reviewing studies of others; conducting studies, analyzing, interpreting, and writing up *your own research project in teams* (3-4 students per team).

II. Student Learning Outcomes

You will learn about (and demonstrate knowledge by using) variety of methods (e.g., experiments, observational studies, survey/questionnaire design). In the process you will demonstrate that you know how to critically consider issues in effectively designing and assessing studies (e.g., epistemological assumptions, ethical issues; operationalization of concepts, independent and dependent variables; survey/questionnaire construction; internal and external validity; reliability; etc.). You will also be introduced to a variety of basic descriptive and inferential statistics and how to think about and these tools; you will need to demonstrate the use of these skills in addressing your questions of interest. The course is designed to insure a solid foundation in basic parametric and non-parametric statistics. In doing so, students will do many *basic* statistical analyses both by hand and via statistical software (i.e., SPSS)...that is,

you'll be asked to demonstrate via your homeworks, quizzes, and presentations/final projects that you understand where those numbers in your statistical analyses are coming from! Other skill sets include being an adept reviewer in evaluating claims and evidence for those claims not only in scientific research but also in enhancing your general skill sets in evaluating said claims (e.g., in the profession and in science, media, journalism) in a diverse world. Presenting your findings from this work and analysis both orally and in your final projects provides the demonstration of your emerging skills and learning in basic quantitative methods.

Prerequisite(s): None

Co-Requisite(s): None

Concurrent Enrollment: None

Recommended Preparation: Very Basic Algebra but we don't assume anything and cover everything you'll need.

III. Course Notes

The course is Web-Enhanced (i.e. Blackboard). Copies of lecture slides and other class information will be posted on Blackboard. **Blackboard learning modules.** *Each week there is a module that will include readings, videos, powerpoint slides, assignments, primary research exemplars facilitating learning objectives – and serving as a foundation -- for that week's discussion and exercises.*

Multimedia or technology-enhanced learning strategies will be used, including the use of *USC's version of Academic Writer (APA's tool)...free.* This is a very good tool for maintaining references and learning to write in APA style and you will be using it with your group in this course. <https://academicwriter-apa-org.libproxy2.usc.edu/6/>

Required Mobile Study to be used with Andy Field's text: app.scanlife.com [if you can't use this go to the companion site for this text or talk to your TA. For each chapter there is a multiple-choice test at the end using this app (where you can forward your answers to the TA) to assess your knowledge and emerging skill. Every student is required take this test and report it to your RA. You may retake them before submitting your score to us. (so obviously aim to persist until you get them all correct unless you think there is a problem with the question/answer in which case please let us know.) These scores, submitted by the due date, will added to your "practice test" grade. This provides us with feedback regarding what you understand and do not understand in a timely fashion so we can intervene. These tests provide great feedback to you regarding your knowledge and skills and great practice for the midterm and final exams.

IV. Description and Assessment of Assignments

Research Team Project

Designing, conducting, analyzing, and writing up a research project on a team (**3-4 total team members**) is a major focus of the course. You will (1) do a literature review leading up to your hypotheses and questions, (2) develop new hypotheses or research questions, (3) design the study, (4) develop or modify the research materials and measures, (5) submit IRB materials/get them approved; (6) gather the data, (7) analyze the data, and (8) write up the research report.

Quantitative research is often done on teams so this will also give you practice in working on a team to optimize your research goals.

In order to give you experience with a variety of approaches, all projects will include:

- a. a survey/scale instrument (as an IV and/or DV) with at least one set of items suitable for examining means, standard deviations, pearson correlations and factor analysis and internal reliability.
- b. an experimental component (in which you have randomly assigned participants to 2 or more conditions) and with a continuous dependent variable so that a standard t-test or ANOVA can be performed.
- c. developing or including materials that will be content coded by multiple coders (to assess rater-reliability). We may be able to use various non-parametric statistical tools as well (e.g., chi-square).

Research projects involve three components of your overall grade (drafts that are part of your assignments, a final paper, a final presentation at the end of the course).

Papers will be submitted in five drafts using APA style (7th edition): (1) Title Page and Introduction, (2) Revised above plus Method, (3) Revised above plus Results, (4) Revised above plus Discussion and Abstract., (5) Final Draft. IRB forms must be completed for full IRB submission (so you could potentially publish your findings). See due dates in the syllabus.

You will provide an ***oral presentation*** (as a group) on the last day of class (Thursday, April 30, 2020) with the ***final paper*** due at the time of the scheduled final exam (Tuesday, May 12 by 10AM). Papers, including the separate sections, should be submitted electronically to Lynn Miller and your TA, Liyuan (Leah) Wang.

Exam. There is One Exam in Class but No Final.

Assignments. There are 12 Assignments including drafts of paper sections and the final paper/presentation. **All Assignments are due by Class time.** Later assignments will incorporate earlier material. All assignments are due as noted. All assignments must be turned in to receive a passing grade in the course. You may redo labs (A assignments) to master material and earn up to full credit (turned in one week after feedback).

V. Grading

a. Breakdown of Grade

Assignment	Points	% of Grade
ST assignments (16)		16%
Paper assignments (11)		22%
Presentation		12%
Final papers		25%
Exam		20%

Participation		5%
TOTAL		100%

b. Grading Scale

The following is our grading scale.

93% to 100%: A	80% to 83%: B-	67% to 69%: D+
90% to 93%: A-	77% to 79%: C+	64% to 66%: D
87% to 89%: B+	73% to 76%: C	60% to 63%: D-
84% to 86%: B	70% to 72%: C-	0% to 59%: F

c. Grading Standards

Assignments are graded based on percent correct. A point scale rubric (using APA required criteria) is provided on blackboard for what is required to earn partial and full point credit per section of the paper (e.g., title page, abstract, methods, results, discussion, references, tables, figures, etc.). Presentations on powerpoint also have a point rubric that students may follow. Participation points is based on attendance and times/quality of participation in class (that the TA will record) and student input (time, quality) regarding group projects (peer/faculty/TA evaluation form of student input).

d. Grading Timeline

Assignments, including portions of projects/papers, are returned a week after submission (except IRB submission materials). Mobile quizzes are returned within one week.

VI. Assignment Rubrics

These are available for APA papers on blackboard.

VII. Assignment Submission Policy

- A. All Paper Assignments (PA) are due on the dates specified; all Statistical Tests (ST) Assignments are due on the dates specified..
- B. All assignments must be submitted via Blackboard to Liyuan Wang.

VIII. Required Readings and Supplementary Materials

Required Texts

Field, A. (2018). *Discovering statistics using IBM SPSS Statistics* (5th ed.) Thousand Oaks, California: Sage. (ISBN:978-1-5264-1952-1 (pbk). (referred to as F). Hardcover is \$111.05; paperback (pbk) is \$40.87; kindle is \$40.00
https://www.amazon.com/Discovering-Statistics-Using-IBM-SPSS/dp/1526419521/ref=asc_df_1526419521/?tag=hyprod-20&linkCode=df0&hvadid=312562231174&hvpos=1o1&hvnetw=g&hvrnd=4672744804427068428&hvpone=&hvptwo=&hvgmt=&hvdev=c&hvdvcmdl=&hvlocint=&hvlocphy=9031025&hvtargid=pla-395483783201&psc=1

Publication Manual of the American Psychological Association (7th ed.). (2019). Washington, D.C.: American Psychological Association. (ISBN-13: 978-1433832178, spiral-bound is a tad easier to use \$44.99 – you will use this for many years; paperback is \$30.00). A variety of vendors for this including the bookstore. https://www.amazon.com/Publication-Manual-American-Psychological-Association-dp-1433832178/dp/1433832178/ref=mt_spiral_bound?_encoding=UTF8&me=&qid=

Required Software

SPSS access – should be able to get through school...hold off purchasing.

Other Electronic Resources

Powerpoint slides, spreadsheets, quick time movies and modules, visuals, articles, and resource links, etc. on Blackboard for the course. These are to be viewed, read, and/or studied prior to that week's class and will prepare you for that week's lab in class.

If you are a member of ICA and/or NCA (which we encourage all of you to be) you will have easy access to the academic journals of those associations at those websites.

<http://www.ichdq.org> (*Journal of Communication; Human Communication Research; Communication Theory; Journal of Computer-Mediated Communication; Communication, Culture, & Critique*).

<http://www.natcom.org> (*Journal of International and Intercultural Communication; Journal of Applied Communication Research; Quarterly Journal of Speech; Review of Communication; Text and Performance Quarterly; Communication and Critical/Cultural Studies; Communication Education; Communication Monographs; Communication Teacher; Critical Studies in Media Communication; First Amendment Studies*)

This is a really great stat website: <http://www.ats.ucla.edu/stat/spss/>

Other websites for well-regarded communication journals to see the latest:

<http://crx.sagepub.com.libproxy.usc.edu> (*sage journals like Communication Research*) or <http://intl-crx.sagepub.com.libproxy.usc.edu>

<http://explore.tandfonline.com/content/ah/comm-highly-cited> (*highly cited communication articles by Taylor & Francis Online publishers*)

Data

1. https://trends.google.com/trends/explore?geo=US&q=%2Fm%2F0cqt90,%2Fm%2F012v1t,%2Fm%2F01qh39,%2Fm%2F01_gbv

Additional Readings (will be either available on blackboard or via a link)

IX. Laptop Policy

All graduate Annenberg majors and minors are required to have a PC or Apple laptop that can be used in Annenberg classes. Please refer to the [Annenberg Digital Lounge](#) for more information. To connect to USC's Secure Wireless network, please visit USC's [Information Technology Services](#) website.

X. Add/Drop Dates for Session 001 (15 weeks: 1/13/20 – 5/1/20)

Friday, January 31: Last day to register and add classes for Session 001

Friday, January 31: Last day to drop a class without a mark of "W," except for Monday-only classes, and receive a refund for Session 001

Tuesday, February 4: Last day to drop a Monday-only class without a mark of "W" and receive a refund for Session 001

Friday, February 28: Last day to drop a course without a mark of "W" on the transcript for Session 001. [Please drop any course by the end of week three (or the 20 percent mark of the session) to avoid tuition charges.]

Friday, February 28: Last day to change pass/no pass to letter grade for Session 001. [All major and minor courses must be taken for a letter grade.]

Friday, April 3: Last day to drop a class with a mark of "W" for Session 001

XI. Course Schedule: A Weekly Breakdown

Important note to students: Be advised that this syllabus is subject to change - and probably will change - based on the progress of the class, news events, and/or guest speaker availability.

	Topics/Daily Activities	Readings and Homework	Deliverable/Due Dates
Part I: The What, Why, and How of Communication Research			
Week 1 Dates: 1/16/2019	Introductions; Introduction to the Research Process in Communication Research; Science and Ways of Knowing; Developing Testable Hypotheses; Ethics and Making Claims; initial observations, collecting data, design, analyzing data, reporting data...	Readings on Blackboard, Preface, Math Review, F1	PA1 i-Star Registered; IRB test completed and passed (certificate copy submitted to TA) by first meeting; PA2 Hypotheses/ Questions for Lab Group (3-4 Students) Due by the End of Class; Schedule 1-hour group meeting with Prof Miller/ Liyuan Wang for Week 2
Week 2 Dates: 1/23/2019	What Counts as Communication Data? Warrants for Research Arguments; Reliability and Validity; Demonstrating Causality; Survey Research and Sampling; Statistical Beginnings...	Readings and modules on Blackboard; F Preface; F1, F2	PA3: Hypotheses/Questions specified (and accepted). Operationalizations developed by the end of class today and submitted by Monday 5PM; ST1 Mobile Test 1 by class time. Set up 1-hour group meeting with Miller/Wang for next week.
Week 3 Dates: 1/30/2019	Workshop for IRB projects – finishing up. SPINE: Experimental Design; Standard Error; Parameters, Interval estimates; Null hypothesis sign. Testing (NHST); Estimation	Readings and modules on Blackboard. F2, F3	PA4-5. IRB project ppt (group); project ready for evaluation and submission to IRB (by weekend)
Week 4 Dates: 2/06/2019	Controversies and Modern Approaches to Theory Testing Building Simple Statistical Models; Method/APA style and platform for writing	Readings on Blackboard, F2, F3 Qualtrics and other blackboard module and slides (including on APA)/ videos	PA6. Intro Outline/Methods Draft Due; ST2, ST3: Mobile Test 2, 3 due class time

Week 5 Dates: 2/13/2019	SPSS Environment; Exploring Data with Graphs; Qualtrics and tech integration (e.g., mouse tracking; stimulus manipulation)	Readings on Blackboard, F3/ F4 ; Module, slides, video	PA7 Intro Draft Due; MT4 Mobile test 4 due class time
Week 6 Dates: 2/20/2019	Content Analysis and Rater Reliability; exploring data with graphs; beast of bias	Readings on Blackboard; F5, F6 ; modules/video	PA8 Qualtrics materials ready (shared with LW); ST 5, ST6 mobile test 5 and 6 due class time
Week 7 Dates: 2/27/2019	Workshop on approved projects ready for data collection/analysis; individually scheduled group meetings with LW	Readings/ modules on Blackboard, F7	Submit Coding modifications to IRB (after approved). ST7 mobile test 7
Week 8 Dates: 3/5/2019	Correlations and Linear Model	Readings/ modules Blackboard, F8, F9	PA9 Method section draft; ST 8,9: mobile test 8, 9
Week 9 Dates: 3/12/2019	Comparing means	F10, F11, F12	ST10, ST11, and ST12: mobile test 10, 11, 12
Spring Break Dates: 3/19/2019	No Class		
Week 10 Dates: 3/26/2019	Comparing means continued and factor analysis	F18	PA10 Intro/Methods/Results Draft Due; ST13: mobile test 18
Week 11 Dates: 4/02/2019	Group SKYPE beginning of week with Prof. Miller – No formal class (KCHC)	F13, F14	ST14, ST15: mobile test 13 (ST14) and 14 (ST15)
Week 12 Dates: 4/09/2019	Categorical outcomes; results workshop; Exam prep	F19	ST16: mobile 19
Week 13 Dates: 4/16/2019	Exam and Discussion prep; results workshop	Modules	Exam
Week 14 Dates: 4/23/2019	Presentation prep; Results workshop	Modules on blackboard	PA11; Discussion Draft Due
Week 15 Dates: 4/30/2019	Student Group Presentations	Modules on blackboard	Presentations Due
STUDY DAYS Dates: 5/2-5/5			

Project Due Dates: 5/12 Tuesday by 10AM	Project due		Final Team Paper Due NO FINAL EXAM
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XII. Policies and Procedures

Additional Policies

Students are expected to be prepared for, attend, and participate in all classes. If you are unable to attend (e.g., due to illness; other critical conflict) please let me know as soon as possible. You may use your computers in class but these are to be used for class purposes during that time (e.g., for SPSS, as appropriate in looking up articles, etc.).

Communication

Please contact me outside of class by email when you cannot come to office hours to arrange a meeting time (e.g., in my office, by skype, via phone, etc.). I usually respond within 48 hours.

Statement on Academic Conduct and Support Systems

a. Academic Conduct

Plagiarism

Plagiarism – presenting someone else’s ideas as your own, either verbatim or recast in your own words – is a serious academic offense with serious consequences. Please familiarize yourself with the discussion of plagiarism in *SCampus* in Part B, Section 11, “Behavior Violating University Standards” policy.usc.edu/scampus-part-b. Other forms of academic dishonesty are equally unacceptable. See additional information in *SCampus* and university policies on scientific misconduct, policy.usc.edu/scientific-misconduct.

b. Support Systems

Counseling and Mental Health - (213) 740-9355 – 24/7 on call
studenthealth.usc.edu/counseling

Free and confidential mental health treatment for students, including short-term psychotherapy, group counseling, stress fitness workshops, and crisis intervention.

National Suicide Prevention Lifeline - 1 (800) 273-8255 – 24/7 on call
suicidepreventionlifeline.org

Free and confidential emotional support to people in suicidal crisis or emotional distress 24 hours a day, 7 days a week.

Relationship and Sexual Violence Prevention and Services (RSVP) - (213) 740-9355(WELL), press “0” after hours – 24/7 on call
studenthealth.usc.edu/sexual-assault

Free and confidential therapy services, workshops, and training for situations related to gender-based harm.

Office of Equity and Diversity (OED)- (213) 740-5086 | Title IX – (213) 821-8298
equity.usc.edu, titleix.usc.edu

Information about how to get help or help someone affected by harassment or discrimination, rights of protected classes, reporting options, and additional resources for students, faculty, staff, visitors, and applicants. The university prohibits discrimination or harassment based on the following *protected characteristics*: race, color, national origin, ancestry, religion, sex, gender, gender identity, gender expression, sexual orientation, age, physical disability, medical condition, mental disability, marital status, pregnancy, veteran status, genetic information, and any other characteristic which may be specified in applicable laws and governmental regulations. The university also prohibits sexual assault, non-consensual sexual contact, sexual misconduct, intimate partner violence, stalking, malicious dissuasion, retaliation, and violation of interim measures.

Reporting Incidents of Bias or Harassment - (213) 740-5086 or (213) 821-8298

usc-advocate.symplicity.com/care_report

Avenue to report incidents of bias, hate crimes, and microaggressions to the Office of Equity and Diversity |Title IX for appropriate investigation, supportive measures, and response.

The Office of Disability Services and Programs - (213) 740-0776

dsp.usc.edu

Support and accommodations for students with disabilities. Services include assistance in providing readers/notetakers/interpreters, special accommodations for test taking needs, assistance with architectural barriers, assistive technology, and support for individual needs.

USC Support and Advocacy - (213) 821-4710

uscsa.usc.edu

Assists students and families in resolving complex personal, financial, and academic issues adversely affecting their success as a student.

Diversity at USC - (213) 740-2101

diversity.usc.edu

Information on events, programs and training, the Provost's Diversity and Inclusion Council, Diversity Liaisons for each academic school, chronology, participation, and various resources for students.

USC Emergency - UPC: (213) 740-4321, HSC: (323) 442-1000 – 24/7 on call

dps.usc.edu, emergency.usc.edu

Emergency assistance and avenue to report a crime. Latest updates regarding safety, including ways in which instruction will be continued if an officially declared emergency makes travel to campus infeasible.

USC Department of Public Safety - UPC: (213) 740-6000, HSC: (323) 442-120 – 24/7 on call

dps.usc.edu

Non-emergency assistance or information.

Annenberg Student Success Fund

<https://annenbergscholarships.usc.edu/current-students/resources/annenbergscholarships-and-awards>

The Annenberg Student Success Fund is a donor-funded financial aid account available to USC Annenberg undergraduate and graduate students for non-tuition expenses related to extra- and co-curricular programs and opportunities.

Breaking Bread Program [undergraduate students only]

<https://undergrad.usc.edu/faculty/bread/>

The Breaking Bread Program is designed to provide individual undergraduate students with an opportunity to meet and have scholarly discussions with faculty members outside of the normal classroom setting. Through this program, students and faculty enjoy good company and great conversation by literally “breaking bread” over a meal together and USC will pick up the tab! Your meal event can take place anywhere outside of the normal classroom setting. Your venue can be a restaurant or eatery on or off-campus.

XIII. About Your Instructor

Lynn Carol Miller (Ph.D., University of Texas at Austin) is a Professor of Communication and Psychology at the University of Southern California Annenberg School for Communication and Journalism. She has published 75 journal articles in referred journals (plus ten referred abstracts) in the top multi-disciplinary journals in the field and over 25 referred chapters; that work receives on average over 425 citations annually. She has received as PI/Co-PI over \$18M to fund her research. She uses virtual interactive and gaming technologies to study, predict, and reduce real-life risky decision-making for high-risk, diverse, community-based populations. The resulting game applications are designed to be both (1) scalable and capable of being rapidly diffused (e.g., through DVDs or the Internet) and (2) usable in neural (e.g., functional MRI) “test-beds” to better understand the complex dynamics of risky decision-making in challenging contexts for risky versus safe target populations. The goal is for researchers to better understand decision-making processes and why and how interventions might be effective (and where they may be failing some individuals) so that we can cumulatively adjust, test, and if more effective, rapidly update and disseminate them broadly. Social computational models for these games (e.g., intelligent agents; neural networks) provide a meta-theoretical and methodological “backbone” for games used in these interventions. Much of her work over the last 30 years has focused on reducing risky sexual behaviors for men who have sex with men and other members of the GLBTQ community. Stigma has been a major variable in that work (and for interventions). In the last 5 years more of her work is focused on personality and mental health (especially depression and social anxiety) and how to leverage gaming and other technologies to understand and reduce the impact of these disorders.

Methods, Measures, and Quantitative Approaches. This course is about methods, measures, and quantitative approaches. Lynn Miller developed, validated and assessed the reliability of, and published 3 major scales that have been highly cited. Her published work demonstrates expertise in a wide range of methods and analytic approaches. Recently, Lynn Miller and her colleagues have argued for a new methodological paradigm for social science research referred to as Systematic Representative Design leveraging classic experimental design and sampling methods to afford greater built in capacity for causal inference and generalizability to everyday life (GEL).